



Sharing ideas and expertise to improve practice together

EMERGENCY CARE COMMUNITY OF PRACTICE

Management of Acute Asthma

This set of resources and links outlines available information to support the NICS Emergency Care Evidence in Practice Series.

What is the evidence?

Cochrane Systematic Reviews

Cochrane reviews regarding acute treatment of asthma:

- **Combined inhaled anticholinergics and beta2-agonists for initial treatment of acute asthma in children (2000)** Anticholinergic drugs, when given in the correct doses, in addition to beta2-agonists can relieve severe asthma attacks in children
<http://www.cochrane.org/reviews/en/ab000060.html>
- **Continuous versus intermittent beta-agonists for acute asthma (2003)** Continuous nebuliser therapy may be more efficacious than intermittent nebulisers for delivering beta-agonist drugs to relieve acute asthma.
<http://www.cochrane.org/reviews/en/ab001115.html>
- **Intravenous beta2-agonists for acute asthma in the emergency department (2001)** Intravenous beta2-agonist drugs in hospital for an asthma attack are no better than inhaling the drugs
<http://www.cochrane.org/reviews/en/ab002988.html>
- **Magnesium sulfate for treating exacerbations of acute asthma in the emergency department (2000)** Using magnesium sulfate as well as standard drugs when hospitalised for a severe asthma attack may provide extra relief, especially when standard treatments are not working well.
<http://www.cochrane.org/reviews/en/ab001490.html>
- **Early emergency department treatment of acute asthma with systemic corticosteroids (2001)** Oral or intravenous steroids when arriving at a hospital emergency department can reduce the need for hospitalisation for people with asthma attacks.
<http://www.cochrane.org/reviews/en/ab002178.html>
- **Antibiotics for acute asthma (2001)** Not enough evidence on whether antibiotics given to people with acute asthma (without evidence of infection) is effective.
<http://www.cochrane.org/reviews/en/ab002741.html>

Best bets

- **Beta-agonists with or without anti-cholinergics in the treatment of acute childhood asthma?(2006)** This Best Bet examines the question: In children with acute asthma who present to the Emergency Department is salbutamol and ipratropium better than salbutamol alone at producing a clinical improvement and reducing hospital stay? <http://www.bestbets.org/cgi-bin/bets.pl?record=00212>

Evidence based guidelines

Guidelines included in this list were produced in 2000 or later and are freely available from appropriate agencies. For more information and other guideline titles see the Emergency Care Community of Practice: Evidence-Based Guideline Resource available from NICS website – www.nicsl.com.au

- **The Asthma Management Handbook (2002)** National Asthma Foundation, Australia. <http://www.nationalasthma.org.au/html/management/amh/amh080.asp>
Includes:
 - Emergency Management Asthma Chart <http://www.nationalasthma.org.au/html/emergency/em001.asp>
- **British Guideline on the Management of Asthma (2005)** British Thoracic Society and Scottish Intercollegiate Guidelines Network, UK <http://www.sign.ac.uk/pdf/sign63.pdf>
- **Emergency and Inpatient Management of Asthma (2006)** Institute for Clinical Systems Improvement, USA. (includes measures/indicators) <http://www.icsi.org/knowledge/detail.asp?catID=29&itemID=1988>
- **Acute management of infants and children with asthma (2004)** NSW Health, Australia http://www.health.nsw.gov.au/policies/PD/2005/pdf/PD2005_386.pdf

Other Resources

- **British Thoracic Society Audit for paediatric asthma**
Minimum in-patient paediatric data set for children > 12 months <http://www.gla.ac.uk/departments/yorkhill/pdf/asthma.pdf>
- **Hunter Area Emergency Services Paediatric Pathways and Protocols for use in Emergency Departments:**
 - 20 plus beds http://www.kaleidoscope.org.au/docs/PW_Asthma_20beds.pdf
 - Hunter/ Rural http://www.kaleidoscope.org.au/docs/PW_Asthma_HunterRural.pdf
 - John Hunter Hospital/ Maitland Hospital http://www.kaleidoscope.org.au/docs/PW_Asthma_JHH_TMH.pdf

Closing the gap - Stories of Improvement and Evidence Implementation

Use of an 'evidence-based implementation' strategy to implement evidence-based care of asthma into rural district hospital emergency departments.

Doherty S, Jones P. *Rural Remote Health*. (2006) Jan-Mar;6(1):529.

This project set out to study ways to improve the management of acute asthma in a rural emergency departments, in four intervention and four control hospitals.

The project focused on improving: the documentation of severity (mild, moderate or severe) in the clinical record, rates of spirometry for the assessment of acute attacks, over use of ipratropium for mild asthma, under utilization of systemic corticosteroids, low utilization of written short-term asthma management plans, and over-use of antibiotics for acute asthma.

Strategies to change practice were developed to address identified barriers to use of the guidelines within each hospital. Strategies included reformatting *National Asthma Council and Respiratory Therapeutic Guideline* recommendations into single page record forms for triage and reminders, and educational sessions. Practice audits demonstrated a significant change in practice, with improved compliance across the six key guideline recommendations.

http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=16569189&query_hl=2&itool=pubmed_docsum